

Applicants request that the U.S. Patent and Trademark Office consider the following remarks and enter the following changes. Consideration and allowance of all presently pending claims are respectfully requested.

**No Admission.** The specification and claims presented below are labeled pursuant to the request of the Patent Office for convenience in examination. The cancellation of a claim or the reference to a claim as "currently amended" is not an admission that the claim was altered for any reason related to patentability.

**Amendments to the Claims:**

This Listing of Claims will replace all prior versions, and listings, of claims in this application:

**Listing of Claims:**

Claims 1-101: Cancelled

102. (New) A method of enhancing the implantation of an embryo into the endometrium of an animal including the steps:

- a. preparing a modified embryo incorporating a glycolipid-attachment molecule construct; and
- b. transferring the modified embryo to the uterus of the animal.

103. (New) A method as claimed in claim 102 where the glycolipid-attachment molecule construct comprises an exogenously modified glycolipid modified to incorporate a binding part and an attachment molecule modified to incorporate a binding part and where the respective binding parts are adapted to enable the modified glycolipid and the modified attachment molecule to bind to each other either directly or indirectly through a bridging molecule.

104. (New) A method as claimed in claim 103 where the modification to the glycolipid is to the carbohydrate portion of the glycolipid.

105. (New) A method as claimed in claim 103 wherein the attachment molecule is selected from the group consisting of: natural or synthetic carbohydrates or oligosaccharides; glycolipids; glycoconjugates; proteins or peptides; acyl groups; and polymers.

106. (New) A method as claimed in claim 105 where the attachment molecule is selected from the group consisting of: poly L-lysine; antibodies; lectins; polyvinyl pyrrolidine; and functionally equivalent derivatives thereof.

107. (New) A method as claimed in claim 106 wherein the attachment molecule is an immunoglobulin.

108. (New) A method as claimed in claim 107 wherein the attachment molecule is immunoglobulin G (IgG).

109. (New) A method as claimed in claim 103 where the attachment molecule is adapted to interact with the epithelial cells of the endometrium, mucus, mucin, or other endogenous or exogenously provided component of mucus.

110. (New) A method as claimed in claim 109 where the attachment molecule is an endometrial attachment molecule.

111. (New) A method as claimed in claim 103 where the glycolipid is selected from the group consisting of phosphoglycerides and sphingolipids.

112. (New) A method as claimed in claim 103 where the attachment molecule and the glycolipid are bound together by simple non-covalent binding interactions including ionic, van de Waals, water exclusion, electrostatic, hydrogen bonding and chelation binding.

113. (New) A method as claimed in claim 103 where the attachment molecule and the glycolipid are bound together by covalent bonding.

114. (New) A method as claimed in claim 103 where the attachment molecule and the glycolipid are bound together by avidin-biotin binding.

115. (New) A method as claimed in claim 114 where the binding part of the glycolipid comprises biotin and the binding part of the attachment molecule comprises avidin.

116. (New) A method as claimed in claim 114 where the binding part of the glycolipid comprises avidin and the binding part of the attachment molecule comprises biotin.

117. (New) A method as claimed in claim 114 where the attachment molecules and the glycolipid are bound together through a bridging molecule.

118. (New) A method as claimed in claim 117 where the bridging molecule comprises avidin and the binding part of both the attachment molecule and the glycolipid comprises biotin.

119. (New) A method as claimed in claim 117 wherein the bridging molecule comprises biotin and the binding part of both the attachment molecule and the glycolipid comprises avidin.

120. (New) A method as claimed in claim 103 where the attachment molecule and the glycolipid are bound together by a chelation interaction between at least one chelator and a chelated metal ion.

121. (New) A method as claimed in claim 120 wherein the binding part of both the attachment molecule and the glycolipid comprises a chelator.

122. (New) A method as claimed in claim 120 wherein the chelator is a poly-histidine recombinant protein.

123. (New) A method as claimed in claim 120 where the chelator is attached covalently to the glycolipid.

124. (New) A method as claimed in claim 120 where the chelator is attached non-covalently to the glycolipid.

125. (New) A method as claimed in claim 124 wherein the chelator is attached to the glycolipid via biotin or avidin.

126. (New) A method as claimed in claim 120 where the chelated metal ion is  $\text{Co}^{2+}$ ,  $\text{Ni}^{2+}$  or  $\text{Cu}^{2+}$ .

127. (New) A method as claimed in claim 103 where the glycolipid modified to incorporate a binding part is a biotinylated glycolipid.

128. (New) A method as claimed in claim 103 where the glycolipid of the ganglioside class that contains sialic acid groups, or a glycolipid of the neutral class that contains galactose.

129. (New) A method as claimed in claim 103 where the attachment molecule is a molecule that has a binding affinity for molecules on cell membranes including the mucus coat of cell membranes.

130. (New) A method as claimed in claim 129 wherein the molecules on cell membranes are receptor sites and/or blood group related antigens.

131. (New) A method as claimed in claim 130 where the cell membranes are endometrial.

132. (New) A method as claimed in claim 102 where the animal is a human or domesticated animal.

133. (New) A method as claimed in claim 102 where the modified embryo is prepared from a species, hybrid or variety of animal different from the species, hybrid or variety of animal of the uterus.